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Title: **The impact of dental phobia on care planning: A vignette study**

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Key points

- Dental care planning is related to treatment need, not the presence or absence of a dental phobia in patients.
- Complexity of treatment need predicts care planning for advanced periodontal treatment, restorations, root canal treatment, provision of crowns and extractions.
- The only differences in care planning between the practitioners' groups were

Abstract

~~People with dental phobia have poor oral health.~~ A high percentage of people with dental phobia have poor oral health. This may be the result of delayed treatment or differences in care planning by the oral healthcare team. This study sought to determine the effect, if any, of dental phobia and complexity of dental care on the proposed care plan devised by clinicians for patients.

Design: An experimental analogue study with independent variables of the presence of phobia and complexity of treatment need. Dependent variables included frequency of care planning elements including periodontal treatment, prevention, restorations, root canal treatment, extraction and provision of crowns, bridges and prostheses.

Participants: 79 dental UK-based practitioners.

Analysis: The association between the case status (phobic vs non-phobic, simple vs complex) and the outcome variables were assessed using chi-square test for association. Logistic regression analyses were also used to determine the predictors of care planning elements.

Findings: There were no differences in care planning for phobic vs non-phobic patients. Complexity of treatment need had significant effects on advanced periodontal treatment, restorations anterior and posterior, root canal treatment, provision of crowns and extractions.

Conclusions: Care planning is influenced by patients' dental needs and not their phobic status.

Keywords: dental phobia, restorative care plan, dental treatment, treatment plan, vignette study

Introduction:

Dental phobia effects approximately 11.6% of the adult population in England, Wales and Northern Ireland (Adult Dental Health Survey [ADHS], 2009) [1]. It has been reported that individuals with dental phobia experience poorer oral health and quality of life in comparison to their non-phobic counterparts. [2, 3] People with dental phobia besides facing the common 'universal' barriers (such as the cost / access of dental care), can face specific barriers, including unhealthy oral health related behaviours (OHRB), lack of motivation to access care [4] and avoidance of treatment, explaining, in part, why this group commonly report poorer oral health. [2] This, in turn can limit certain care options (such as provision of complex restorative care) that requires optimal oral maintenance, patient commitment to attend multiple visits [5] and cooperation.

There might be other factors contributing to the differences in oral health status such as patient dental treatment preference [6] or differences in care planning when the patient with dental phobia manages to attend for a dental treatment. Indeed, Hill *et al*., (2008) [7] found that dentists in their study mentioned that quality of care for anxious patients might be compromised because of their anxiety status. This fact to the authors' knowledge has not been investigated previously among people with dental phobia.

In order to investigate how dentists who work in various settings and treat people with different degrees of dental anxiety , would care plan for this group, a vignette study was designed. In this method, the complex decision-making process was simplified using only complexity of care and presence of dental phobia variables. Vignette studies *'are a valid measure of what physicians do during actual clinical encounters with patients*'.[8] Patient-simulation vignettes have been used to evaluate health care professionals' ability to diagnose, treat specific medical conditions, choose specific treatments and give different treatment options. [9] Additionally, this method can explore '*various factors that influence clinicians' judgments and decisions'* by having an experimental control which otherwise would not have been '*feasible or ethical using real patients*'.[10] In dentistry, a vignette study has been used for treatment decisions previously.[11]

The aim of this study was to determine the effect of dental phobia and complexity of dental care need on the proposed plan of dental treatment for patients. Specifically, to test whether the presence of dental phobia modifies the proposed dental care plan for a patient compared to a similar non-phobic patient and whether any effect varies depending on the setting that a dentist is practising. A secondary objective was to determine whether the proposed care plans vary according to the degree of specialisation of the dentist participant.

Methods:

Ethical approval was obtained from Health Research Authority (HRA: 16/HRA/2261) for this experimental analogue study using patient vignettes to explore decision-making by dental practitioners in three groups. Vignettes describing the oral health of fictional patients (including radiographs and clinical information) were presented to three groups of dental practitioners. The four different vignettes combined presence or absence of anxiety as well as complexity of care ('simple' or 'complex'). The principal investigator (EH) chose radiographic images from two patients who had been referred to the Department of Sedation and Special Care Dentistry (SSCD) for dental treatment under conscious sedation at Guy's and St Thomas' Foundation Trust (GSTFT). The radiographic images for each patient comprised a dental panoramic tomogram (DPT), bitewing radiographs and/or a number of periapical views. The images were selected to reflect either a requirement for simple dental treatment, or 'complex' dental treatment. The 'complex' case presented with 2 molar teeth where decay was extending deeply into dentine and close to the pulp suggesting that root canal therapy (RCT) might be required and a seal of the coronal tissue was viable. The broken down upper left incisor in this case would require a crown after completion of RCT. The 'complex' care DPT also showed interproximal bone defects indicating a need for periodontal treatment. The images were anonymised before use in the study.

Together with the images, vignettes describing the case scenarios were devised which included the following information all of which was fictional and bore no relation to any real patient:

- An ID number,
- Address,
- Date of birth,
- Presenting complaint and history of complaint,
- Detailed medical, dental and social histories.

The questionnaire was piloted with four dentists who recommended minor changes to the wording of the vignette case scenarios. The vignettes cases can be requested from the authors.

Participants

The population for this study comprised three groups: general dental practitioners (GDP), special care dentists and clinical teachers from the Faculty of Dentistry, Oral & Craniofacial Sciences, King's College London. These groups were chosen because they differ in the degree to which they specialise in the management of patients suffering from dental phobia. Each practitioner produced a care plan for one case from the four vignettes. Vignettes were allocated to individual practitioners using a randomisation table devised by the study statistician. Practitioners were contacted by post in October 2016, with reminders sent at two timepoints (4 and 8 weeks after the initial mailing). The care plans were coded to ensure confidentiality and anonymity. In the first instance, 155 questionnaires were sent with 5 returned envelops mentioning 'not known at this address'.

Sample size calculation

The sample size calculation was performed on the basis of using logistic regression analysis to determine the significant predictors of binary outcomes (extraction, filling, root canal treatment and prosthesis). Assuming an odds ratio of 5.2 (from the authors' previous data) with 80% power with an R^2 value of 0.5 a study would require a minimum sample of 79 to identify significant predictors at 5% level of significance. The power calculation was carried out using Gpower version 3.1.9.2, Universität Düsseldorf.

Statistical analysis

Descriptive statistics were used to summarise the sample characteristics and the responses. The association between the cases (phobic vs non-phobic or simple vs complex) with other category variables were assessed using chi-square test for association. The study variables phobic status, complexity of the case, participant category and work setting were considered as potential predictors of the choice of treatment. To determine the significant predictors of endodontic treatment (single-

rooted and multi-rooted), logistic regression analyses were carried out separately for each outcome measure. The outcome measures were dichotomised by answering ‘yes’ for a restoration and ‘no’ for no restoration and complexity of the case and the type of dentist were included as predictor variables. Separate logistic regression analyses were carried out for the significant predictors of basic periodontal treatment provided by different categories of dentists. Logistic regression analyses were also used to determine the significant predictors of different types of restorations. All the analyses were carried out using SPSS version 24.0 (IBM SPSS Inc., USA) and the significance was assumed at 5% level.

Results:

There was a 56% questionnaire response rate (84 out of 150) with five questionnaires excluded because they had incomplete care planning data. The remaining 79 practitioners comprised 28 (36.4%) GDPs, 16 (20.8%) special care dentists (SCD) and 33 (42.9%) clinical teachers from a hospital setting that participated in this study. There were in total 40 (51%) returned batches with dental phobia and 39 (49%) complex vignette batches (table 1).

Table 1

Most of the participants were female (42, 53%) and not on a specialist list (48, 61%) (table 2). Fourteen (47%) of participants who were registered on the specialist list were on a Special Care Dentistry (SCD) list. Generally, the dentists were between the ages of 40 to 49 (26, 33%).

Table 2

There were no significance differences ($p>0.05$) with regards to suggested care (treatment) planning between the vignette study with or without dental phobia (table 3).

Table 3

Table 4 shows the significant differences in suggested treatment for the simple and complex vignettes. There were significant differences ($p <0.01$) in levels of for 'advanced periodontal treatment', 'direct tooth-coloured restorations (anterior) and (posterior)', 'root canal fillings (single-rooted) and (multiple-rooted)', provisions of 'crowns' and 'extractions'.

Table 4

Tables 5, 6 and 7 summarises the results of the regression analyses for all the outcome variables. There were no differences in care planning for phobic vs non-phobic patients. Complexity of treatment need had significant effects on advanced

periodontal treatment, direct tooth-coloured restorations anterior and posterior, amalgam fillings, provision of crowns and extractions.

Table 5, 6, 7

Discussion:

In this study, the practitioners from various care settings did not care plan differently on the basis of the patient vignette's phobia status. However, there were, understandably, differences between 'simple' and 'complex' vignette cases, where the complex case was care planned for advanced periodontal and restorative care. It has been argued that health care professionals in a secondary or tertiary care setting will '*have an ongoing transfer of research knowledge*' and a '*more conductive environment for consideration of the relevant and synthesized research.'* [12] This could explain why they might care plan differently. In this study, the only differences in care planning between the practitioners' groups were suggestion of provision of dental amalgam (commonly in CDS participants). The specialists less commonly care planned for 'root canal fillings'. This might simply be the reflection of patients who attend for treatment in their setting. Many patients seen in secondary care have either complex medical problems or psychological disorders and/or have moderate to serve dental anxiety with extensive dental needs.[13] These factors may influence provision of more complex care.

Another explanation can be practitioners' commitment to the General Dental Council (GDC) principles outlined in '*Standards for the Dental Team'*.[14] Dentists not only deliver appropriate care whilst considering patient's health and wellbeing (according to principle 1) but also '*maintain, develop and work within [your] professional knowledge and skills'* (principle 7). [14] The participants working in a secondary care setting in this study despite the fact of additional stressors such as '*being the end point for referral, rather than able to refer on in difficult cases'* [15] care planned accordingly. The reasons for introducing 'complex' care in this study was that people with dental phobia present with a significant amount of overdue dental treatments [16, 17] and disease management can be complicated. The reasons for differences between the 'simple' and 'complex' cases care planning in the following care elements ('*advanced periodontal treatment'; 'direct tooth-coloured restorations [posterior]*'; '*crowns*'; '*root canal treatment'* and *'extractions'*) reflected the nature of the case complexity. The 'complex' case was offered complex restorative care as the oral disease was extensive (the cases can be requested from the authors). This

contradicts a previous study, where dentists provided simple periodontal, restorative and extraction treatments routinely for patients with dental anxiety and phobia with conscious sedation [18] and is in line with ADHS (2009) secondary analysis findings [2] where people with dental phobia presented with more missing teeth. This might suggest that if patients with dental phobia didn't require conscious sedation for dental treatment, they might be care planned for complex restorative care. Indeed, many patients with dental phobia who have undergone a course of cognitive behavioural therapy (CBT) have been able to have future dental treatment without sedation.[19]

This discrepancy between what care is routinely provided and care planned for, could also be explained by the fact that many practitioners may not (or perceive to) have a full control over the provided dental care. Factors such as individuals' beliefs, perceptions of external factors, social norms, patient preferences or organizational barriers and facilitators may have an impact on dentists' behaviours. [20, 21] Another argument can be that investigating dental practitioners' intentions to treat using self-report and vignette methodology might not reflect the 'real life' scenario [22,23] and practitioners might overestimate their '*adherence to recommended norms'.* [24] However, these arguments have been dismissed by several authors who have found vignettes methods being a valid tool for measuring quality of care and assessing clinicians' judgment and decisions making. [8, 9]Another possibility is that clinicians are facing barrier's (such as funding, local policies and lack of training) that might have an impact on the care provided within their setting. [18]

Other influencing patients' factors are treatment preference. [22] This needs to be considered especially in the current patient care centred environment. Chapple *et al*., (2003) [25] suggest that responsibility for care planning decision should be shared equally between the dentists and their patients. But they found that lack of knowledge about dentistry and having trust in the care provider, can lead to patients taking a passive role on in the decision making processes. [25] Indeed, over 80% of people with dental phobia reported a feeling of involvement in their decisions about their dental care and mentioned that they have confidence and trust in their dentist.[2] It is worth investigating how people with dental phobia would interact with dental team to improve their oral health.

Several limitations of the present study were identified. Despite using reminders to decrease bias, there was only a 56% response rate; however, this is reasonable higher to general survey based research where the average response rate is 40% or lower. This is also similar to other studies where dentists participate [26] and a declining response rate are seen within health care professionals decade after decade. [27] Although following up the non-participating subjects is recommended, this wasn't possible in this study as participants were anonymised. The use of random sampling in the allocation of vignette factors can increase validity [23] and was used in this study. The study was cross-sectional therefore it was not possible to assess subjects' individual difference factors that may have influenced their decision-making. It might be argued that it is problematic to suggest a care plan without patients' involvement, as this involvement not only is essential for having a meaningful interaction with patients for establishing a good rapport for a successful care plan and eventually treatment outcome, but also to assess clinically the patients' level of anxiety and most importantly to have patients' input into their own care. This interpersonal interaction is highly complicated and multifaceted [26] but this patient-dentist interaction wasn't the aim of this current study. Decision-making is a complex process where studies are unable to capture all the influencing factors. [11] A multi-method study (including objective measures to complement the self-reported results) would have been difficult and costly to conduct with an unknown effect on the degree of bias.

The incidence and prevalence of dental phobia has been constant in the past decades. [28, 29 ,30, 31] Therefore, it is encouraging to notice in this study that practicing dentists' attitudes toward patients with dental phobia are not a barrier for patients receiving the best possible dental care**.** A future study could investigate the role of improving oral health related behaviours (OHRB) by practising minimum intervention dentistry (MID) [32, 33] on oral health outcome (oral health status, quality of life and improve oral health prevention knowledge) and addressing phobia in this group of patients.

Conclusion

After being mindful of all the influencing factors, it seems that care planning is influenced by patients' dental needs and not their phobic status. The provision of oral health care prevention and adapting the MID principle can be beneficial for this group. The availability of Cognitive Behavioural Therapy (CBT) which addresses patients' dental phobia might improve patients' oral health and quality of life as it may improve their access to care. However, the important role of offering pharmacological therapies with complementary appropriate behavioural management techniques must not be underestimated.

Declaration if interest
The authors have no special interest and did not received any funding for this study.

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Table1: Shows the breakdown and nature of the returned batches.

Vignette type	**Number (%)**
Complex case without dental Phobia	**21 (27)**
Complex case with dental Phobia	**21 (27)**
Simple case without dental phobia	**18 (23)**
Simple case with dental phobia	**19 (24)**
Total	**79 (100)**

Table 2: Demographic characteristics of study participants (N=79).

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Variable	**Number (%)**
Gender	
Male	35 (44)
Female	42 (53)
Missing	2 (3)
GDC specialist	
Yes	30 (38)
No	48 (61)
Missing	1 (1)
State specialist	39 (48%)
SPC	14
Periodontist	6
Prostodontics	5
SPC+Paediatric	1
Paediatric	2
Orthodontics	2
Age	
20-29	3 (4)
30-39	18 (23)
40-49	26 (33)
50-59	21 (26)
60+	10 (13)
Missing	1 (1)
Year of qualification	
Before 1980	8 (10)
1980-1984	14 (18)
1985-1989	11 (14)
1990-1994	14 (18)
1995-1999	7 (9)
2000-2004	13 (16)
2005-2009	8 (10)
2009-2015	1 (1)
2016	2 (3)
Missing	1(1)

Table 3: Care planning suggestions group detailing different treatment options grouped on the basis of phobic and non-phobic vignette cases

Study no	Treatment Options	Participants offered treatment (Yes), Did not offer (No)	Non-phobic % (n=30)	Phobic % (n=40)	Chi-square, df and P value
1.	**Basic Periodontal Treatment provided by Hygienist**	Yes: 45 (57.0) No: 34 (43.0)	24 (61.5) 15 (38.5)	21 (52.5) 19 (47.5)	0.66 1 0.42
2.	**Basic Periodontal Treatment provided by dentists**	Yes: 28 (35.4) No: 51 (64.6)	14 (35.9) 25 (64.1)	14 (35.0) 26 (65.0)	0.007 1 0.93
3.	**Advanced Periodontal Treatment**	Yes: 26 (32.9) No: 53 (67.1)	11 (28.2) 28 (71.8)	15 (37.5) 25 (62.5)	0.773 1 0.38
4.	**Non-Operative Care (Prevention)**	Yes: 59 (74.7) No: 20 (25.3)	27 (69.2) 12 (30.8)	32 (80.0) 8 (20.0)	1.211 1 0.27
5.	**Direct tooth-coloured Restorations**	Yes: 24 (30.4) No: 55	9 (23.1) 30 (76.9)	15 (37.5) 25 (62.5)	1.942 1 0.16

Study no	Treatment Options	Participants offered treatment (Yes), Did not offer (No)	Non-phobic % (n=30)	Phobic % (n=40)	Chi-square, df and P value
	(anterior)	(69.6)			
6.	**Direct tooth-coloured Restorations (posterior)**	Yes: 27 (34.2) No: 52 (65.8)	13 (33.3) 26 (66.7)	14 (35.0) 26 (65.0)	0.024 1 0.88
7.	**Amalgam fillings**	Yes: 28 (35.4) No: 51 (64.6)	11 (28.2) 28 (71.8)	17 (42.5) 23 (57.5)	0.024 1 0.18
8.	**Root Canal Fillings (Single-rooted)**	Yes: 34 (43.0) No: 45 (57.0) Total:	18 (46.2) 21 (53.8)	16 (40.0) 24 (60.0)	0.305 1 0.58
9.	**Root Canal Fillings (Multiple-rooted)**	Yes: 28 (35.4) No: 51 (64.6)	15 (38.5) 24 (61.5)	13 (32.5) 27 (67.5)	0.307 1 0.58
10.	**Crowns**	Yes: 31 (39.2) No: 48 (60.8)	15 (38.5) 24 (61.5)	16 (40.0) 24 (60.0)	0.020 1 0.89

Study no	Treatment Options	Participants offered treatment (Yes), Did not offer (No)	Non-phobic % (n=30)	Phobic % (n=40)	Chi-square, df and P value
11.	**Bridges**	Yes: 5 (6.3) No: 74 (93.7)	**3(7.7) 36(92.3)**	**2(5.0)** 38 (95.0)	0.24 1 0.68
12.	**Extractions**	Yes: 63 (79.7) No: 16 (20.3)	30 (76.9) 9 (23.1)	33 (82.5) 7 (17.5)	0.38 1 0.54
13.	**Prostheses**	Yes: 8 (10.1) No: 71 (89.9)	4 (10.3) 35 (89.7)	4 (10.0) 36 (90.0)	0.001 1 0.97

Table 4: Care planning suggestions group detailing different treatment options grouped on the basis of simple and complex vignette cases

		Participants offered treatment (Yes), Did not offer (No)	**Complex % (n=42)**	**Simple % (n=37)**	**Chi-square, df and P value**
1.	**Basic Periodontal Treatment provided by Hygienist**	Yes: 45 (57.0) No: 34 (43.0)	27 (64.3) 15 (35.7)	18 (48.6) 19 (51.4)	1.962 1 0.16
2.	**Basic Periodontal Treatment provided by dentists**	Yes: 28 (35.4) No: 51 (64.6)	18 (42.9) 24 (57.1)	10 (27.0) 27 (73.0)	2.154 1 0.14
3.	**Advanced Periodontal Treatment**	Yes: 26 (32.9) No: 53	1 **(7.1)** 39 (92.9)	23 (62.2) 14 (37.8)	26.969* 1

		Participants offered treatment (Yes), Did not offer (No)	Complex % (n=42)	Simple % (n=37)	Chi-square, df and P value
		(67.1)			<0.0001
4.	**Non-Operative Care (Prevention)**	Yes: 59 (74.7) No: 20 (25.3)	34 (81.0) 8 (19.0)	25 (67.6) 12 (32.4)	1.864 1 0.17
5.	**Direct tooth-coloured Restorations (anterior)**	Yes: 24 (30.4) No: 55 (69.6)	22 (52.4) 20 (47.6)	2 **(5.4)** 35 (94.6)	20.523* 1 <0.0001
6.	**Direct tooth-coloured Restorations**	Yes: 27 (34.2) No: 52	21(50.0) 21 (50.0)	6 (16.2) 31 (83.8)	9.980* 1 0.002

		Participants offered treatment (Yes), Did not offer (No)	Complex % (n=42)	Simple % (n=37)	Chi-square, df and P value
	(posterior)	(65.8)			
7.	**Amalgam fillings**	Yes:28 (35.4) No: 51 (64.6)	16 (38.1) 26 (61.9)	12 (32.4) 25 (67.6)	0.276 1 0.6
8.	**Root Canal Fillings (Single-rooted)**	Yes: 34 (43.0) No: 45 (57.0)	34 (81.0) 8 (19.0)	0 (0.0) 37 (100)	52.583* 1 <0.0001
9.	**Root Canal Fillings (Multiple-rooted)**	Yes: 28 (35.4) No:51 (64.6)	28 (66.7) 14 (33.3)	0 (0.0) 37 (100)	38.209* 1 <0.0001

		Participants offered treatment (Yes), Did not offer (No)	Complex % (n=42)	Simple % (n=37)	Chi-square, df and P value
10.	**Crowns**	Yes: 31 (39.2) No: 48 (60.8)	30 (71.4) 12 (28.6)	1 (2.7) 36 (97.3)	38.969* 1 <0.0001
11.	**Bridges**	Yes: 5 (6.3) No: 74 (93.7)	**4 (9.5)** 38 (90.5)	1 (2.7) 36 (97.3)	1.544 1 0.36
12.	**Extractions**	Yes: 63 (79.7) No: 16 (20.3)	29 (69.0) 13 (31.0)	34 (91.9) 3 (8.1)	6.356* 1 0.01
13.	**Prostheses**	Yes: 8	3 **(9.5)**	**4**	0.036

		Participants offered treatment (Yes), Did not offer (No)	**Complex % (n=42)**	**Simple % (n=37)**	**Chi-square, df and P value**
		(10.1) No: 71 (89.9) Total:	**38** **(90.5)**	**(10.8)** 33 **(89.2)**	1 1.00

* indicates statistically significant at level 0.05

Table 5. Results of the logistic regression analyses for *periodontal treatment and prevention* outcome variables.

		Basic Periodontal Treatment provided by Hygienist			**Basic Periodontal Treatment provided by dentists**			**Advanced Periodontal Treatment**			**Non-Operative Care (Prevention**		
Predictors	**Comparison (reference) group**	**Odds ratio**	**95% CI**	**P value**	**Odds ratio**	**95% CI**	**P value**	**Odds ratio**	**95% CI**	**P value**	**Odds ratio**	**95% CI**	**P value**
The case mentioned phobia	The case did not mention phobia	0.63	0.25 to 1.60	0.33	0.98	0.37 to 2.59	0.97	1.87	0.56 to 6.29	0.31	1.93	0.67 to 5.53	0.22
The case is considered a Complex case	Is a Simple case	1.99	0.79 to 5.03	0.15	2.0	0.76 to 5.32	0.16	0.046	0.012 to 0.18	<0.0001 *	1.92	0.67 to 5.47	0.23
The participant works in CDS	The participant is a General Dental Practitioner	0.54	0.15 to 1.91	0.34	0.31	0.07 to 1.34	0.12	1.48	0.29 to 7.41	0.64	0.80	0.20 to 3.26	0.76
The participant works in a hospital setting	The participant is a General Dental Practitioner	0.64	0.22 to 1.84	0.40	0.77	0.27 to 2.19	0.62	1.10	0.29 to 4.26	0.89	1.13	0.34 to 3.74	0.84

* Indicates statistically significant at level 0.05

CI= confidence interval

Table 6. Results of the logistic regression analyses for *restorative care* outcome variables.

		Direct tooth-coloured Restorations (anterior)			***Direct tooth-coloured Restorations (posterior)***			***Amalgam fillings***			***Extractions***		
Predictors	**Comparison (reference) group**	**Odds ratio**	**95% CI**	**P value**	**Odds ratio**	**95% CI**	**P value**	**Odds ratio**	**95% CI**	**P value**	**Odds ratio**	**95% CI**	**P value**
The case mentioned phobia	The case did not mention phobia	3.7	1.05 to 12.99	0.04*	1.28	0.45 to 3.62	0.64	2.23	0.76 to 6.58	0.15	1.46	0.44 to 4.82	0.53
The case is considered a Complex case	Is a Simple case	21.4	4.20 to 109.11	<0.0001 *	4.86	1.62 To 14.54	0.005*	1.58	0.55 to 4.57	0.40	0.18	0.05 to 0.71	0.015*
The participant works in CDS	The participant is a General Dental Practitioner	0.67	0.12 to 3.68	0.64	0.42	0.10 to 1.78	0.24	16.90	3.52 to 81.01	<0.0001 *	5.03	0.53 to 47.69	0.16
The participant works in a hospital setting	The participant is a General Dental Practitioner	1.24	0.33 to 4.66	0.75	0.48	0.15 to 1.50	0.21	2.54	0.74 to 8.72	0.14	1.03	0.30 to 3.57	0.96

* Indicates statistically significant at level 0.05

CI= confidence interval

Table 7. Results of the logistic regression analyses for *complex care* outcome variables

		Root Canal Fillings (Single-rooted)			***Root Canal Fillings (Multiple-rooted)***			***Crowns***			***Bridges***			**Prostheses**		
Predictors	**Comparison (reference) group**	**Odds ratio**	**95% CI**	**P value**	**Odds ratio**	**95% CI**	**P value**	**Odds ratio**	**95% CI**	**P value**	**Odds ratio**	**95% CI**	**P value**	**Odds ratio**	**95% CI**	**P value**
The case mentioned phobia	The case did not mention phobia	0.63	0.12 to 3.23	0.58	0.99	0.21 to 4.57	0.99	1.79	0.44 to 7.31	0.42	0.77	0.09 to 6.37	0.81	0.87	0.20 to 3.81	0.85
The case is considered a Complex case	Is a Simple case	X	X	0.99	X	X	0.99	113.63	12.31 to 1048.96	<0.0001 *	3.27	0.299 to 35.78	0.33	0.91	0.21 to 3.98	0.90
The participant works in CDS	The participant is a General Dental Practitioner	0.52	0.06 to 4.85	0.57	0.043	0.003 to 0.53	0.014 *	0.17	0.025 to 1.17	0.071	4.22	0.34 to 53.06	0.27	0.84	0.14 to 5.25	0.86
The participant works in a hospital setting	The participant is a General Dental Practitioner	0.50	0.08 to 3.23	0.47	0.08	0.009 to0.76	0.027 *	0.46	0.095 to 2.21	0.33	0.85	0.05 to 14.50	0.91	0.38	0.064 to 2.27	0.29

X – values could not be calculated due to fewer cases in that category.

* Indicates statistically significant at level 0.05

CI= confidence interval